

EVFS In-Factory RSA Guidance

1. Tests to be carried out in the factory:

- a. **Zero Initial condition. (for each test condition).** The National Institute of Standards and Technology Handbook 44 (NIST HB44) as adopted in Title 4 of the California Code of Regulations (4 CCR § 4000. [NIST HB44, 3.40.] S.2.1), and CDFA-DMS Examination Procedure Outline (EPO) No. 52 Electric Vehicle Fueling Systems, (Rev. - 05/2025), Page 22, Section 4.1. and 4.1.1.
- b. **Starting Load Test.** 4 CCR § 4002.11 [3.40.] N.2. EPO No. 52 (Rev. - 05/2025), Pg 22, Section 4.1.3.
- c. **Light Load Accuracy Test.** 4 CCR § 4000. [3.40.] N.3.3., 4 CCR § 4002.11 [3.40.] T.2. EPO No. 52 (Rev. - 05/2025), Pg 22-23 Section 4.1.4.
 - i. For AC charging equipment, light load testing shall be carried out at a current between 4 and 10 amps.
 - ii. For DC charging equipment, light load testing shall be carried out at any voltage output and a current between 10% and 20% of the MDA, but not less than 30 A.
- d. **Midrange Load Accuracy Test (AC Devices Only).** 4 CCR § 4000. [3.40.] N.3.3., 4 CCR § 4002.11 [3.40.] T.2. EPO No. 52 (Rev. - 05/2025), Pg 23-24 Section 4.1.4.
 - i. For AC charging equipment, midrange load testing shall be at a current between 40% and 60% of the MDA.
- e. **Full Load Accuracy Test.** 4 CCR § 4000. [3.40.] N.3.3. EPO No. 52 (Rev. - 05/2025), Pg 24-26 Section 4.1.6.
 - i. For AC charging equipment, full load testing shall be at a current between 70% and 100% of the MDA.
 - ii. For DC charging equipment, full load testing shall be at a current between 25% and 100% of the MDA.

Note: The two DC load test points shall not be the same.
- f. **Repeatability Test.** A repeatability test shall include at least three consecutive test loads. Test loads must be conducted under approximately the same load conditions. REF: 4 CCR § 4000. [1.10.] G-S.5.4., [3.40.] N.4., T.3.

EVFS In-Factory RSA Guidance

- g. **During each test verify agreement in indications, recorded representations, and mathematical agreement.** 4 CCR § 4000. [1.10] G-S.5.2.2., G-S.5.5.
 - h. **Verification of Load Test Tolerances.** Each device under test shall be evaluated for conformance to the established tolerances as detailed in 4 CCR § 4002.11 [3.40.] T.2. and 4 CCR § 4000. [3.40.] T.3. EPO No. 52 (Rev. - 05/2025), Pg 26. In-factory testing shall only approve for sale, shipping, and placing into service those devices meeting the established acceptance tolerance.
- 2. The following information is to be provided to a Registered Service Agency placing the device in service and is to be submitted with a placed-in-service report to the local county sealer of weights and measures. The following information shall be made available in hard copy shipped with the unit, and electronically for forwarding with a placed-in-service report:
 - a. Name of Registered Service Agency and agency number, name of Registered Service Agent performing the testing in-factory, Registered Service Agent number.
 - b. Test names and test data, (i.e., Starting Load, Light Load, Full Load, if applicable the Midrange Load, and repeatability), measured energy, indicated energy, % error, MMQ, MDA, amperage for each test, and the starting and ending totalizer values for both right and left ports as applicable for each test carried out.
 - c. Device Manufacturer, Model Number, Serial Number, and Type Evaluation Number.
 - d. Audit trail/event log information (if applicable).
 - e. Date tested (in-factory).
 - f. Manufacturer, model, and S/N of each standard used to verify accuracy of the device.
 - g. Calibration performed dates and due dates for each standard used to verify accuracy of the device.
 - h. Certificate of accuracy and traceability for each instrument used to verify accuracy of the device, including calibration test data.
 - i. Length of cable used to perform testing (longest available to the customer).

EVFS In-Factory RSA Guidance

- j. Name, address, and telephone number of the local party responsible for the device.
- k. Certification statement, i.e.:
 - i. I, _____RSA Number_____, hereby confirm this station with serial number _____ was tested and found to meet the applicable tolerances and requirements in accordance with Division 5 of the Business and Professions Code (BPC) and Title 4, Division 9 of the California Code of Regulations as reported in the attached test results.